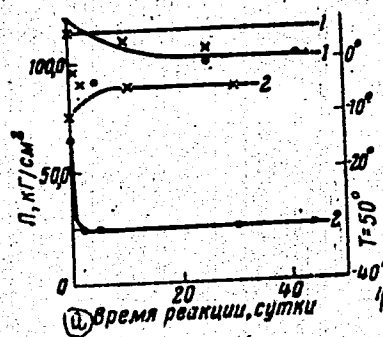


Study of the vulcanization of...

Fig. 4: Change of the T-50 index and tensile strength of the mixture L-4 and sodium thiosulfate.

Legend: 1) tensile strength;
2) T-50 index; X - before thermal vulcanization,
• - after thermal vulcanization.



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89589

S/190/61/003/002/007/012
B101/B215

Study of the vulcanization of....

Fig. 5: Kinetics of the S accumulation on latex polymer, and change in the maximum expansion of the films in benzene by interaction of L-4. and sodium thiosulfate.

Legend: 1) maximum expansion;
2) combined sulfur; X - before,
• - after thermal vulcanization;
a) time of reaction, days.

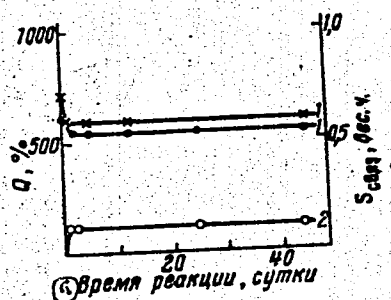


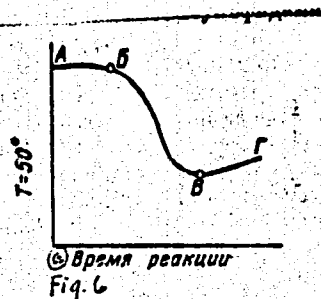
Рис. 5

Card 10/11

Study of the vulcanization of...

S/190/61/003/002/007/012
B101/B215

Fig. 6: Curve typical of the change of the T-50 index in the interaction of PCP latex and polysulfides; a) time of reaction



Card 11/11

20865

S/138/61/000/003/005/006
A051/A129

15 3110 1372, 1474,

AUTHORS: Sandomirskiy, D. M.; Fogel', V. O.; Khazen, L. Z., and
Khu Yu-Mu

TITLE: The effect of the gelatinization process of latex on the change
of its heat- and electro-conductivity

PERIODICAL: Kauchuk i rezina, no. 3, 1961, 26-30

TEXT: The authors have investigated some simple systems consisting of
latex and a small quantity of gelatinizing agents, in order to determine the
kinetics of the processes taking place during gelatinization, e. g., changes
in the heat- and electro-conductivity and the drying of the gel formed. A
spherical bicalorimeter (Fig. 1) was used for investigating the heat-conduc-
tivity. This is a metal sphere surrounded by a thin spherical layer of the
investigated liquid. Under regular conditions the difference of the temper-
atures of the thermostat medium and the center of the bicalorimeter is ex-
pressed by the formula:

$$t_f - t = (t_f - t_0)e^{-m\tau} \quad \text{or} \quad \ln(t_f - t) = \ln(t_f - t_0) - m\tau \quad (1),$$

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S/138/61/000/003/005/006
A051/A129

The effect of the gelatinization process of...

where t_f is the thermostat temperature, t_0 - the initial temperature of the bicalorimeter, t - temperature of the central part of the bicalorimeter corresponding to the duration τ of its heating up, m - rate of heating. Figure 2 shows the relationship of $\ln(t_f - t)$ to the duration of the heating. The coefficient of the heat-conductivity of the liquid λ is determined from the formula:

$$\lambda = \frac{1-l}{12} \left(C_1 \gamma_1 + \frac{1-l}{1} C_2 \gamma \right) D_1^2 m \quad (2),$$

where $l = D_1/D_2$ is the ratio of the internal and external diameters of the bicalorimeter; $C_1 \gamma_1$ - the thermal capacity of the metal sphere; $C \gamma$ - the volumetric thermal capacity of the investigated liquid. In the experiments the method of regular heating of the bicalorimeter was supplemented by the method of stationary internal heating of the sphere, inside of which a heater was placed. For the case of stationary heating of the double-layer sphere, the heat conductivity coefficient is expressed by

$$\lambda = \frac{Q_{\text{aver}} \cdot \delta}{F_{\text{aver}} \cdot \Delta t} \quad (3a).$$

The quantity of heat transmitted through the layer ($Q_{\text{stationary}}$) was determined from the expenditure of electric energy by the heater. The method of

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S/138/61/000/003/005/006
A051/A129

The effect of the gelatinization process of...

regular conditions was used to determine the relationship λ of the latexes and the gelatinizing mixtures to the temperature, and the stationary conditions method was used for determining the kinetics of the λ change during the gelatinization process and that of syneresis. In order to determine the effect of gelatinization on the heat-conductivity, the kinetics of the temperature change relationship to the heat-conductivity was investigated both for revertex and latex L-7 (Figs. 3, 4). It was noted that immediately after gelatinizing agents are introduced into the latex mixture, processes occur causing a decrease in the heat-conductivity of the system. The results obtained showed that after the system has reached a certain degree of stability even before the formation of a solid gel, structures are formed in it gradually, which sharply limit its mobility in certain sections, hampering convection, diffusion and heat-exchange and thus decreasing the heat-conductivity. The change of the latter and that of the electro-conductivity does not stop after the formation of the solid gel: both the electric resistance and the heat-conductivity increase. The heat-conductivity was measured when the discharging liquid was removed from the system, in order to determine the effect of the syneresis on the thermal-conductivity (Fig. 8). It is pointed out that the change both in the heat-conductivity, as well as that of

X

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S/138/61/000/003/005/006
A051/A129

The effect of the gelatinization process of...

the electric resistance due to syneresis begins before the removal of the liquid phase becomes apparent. A study on the change in the electric conductivity of the latex gels, when these dry out showed that this process differs from the drying out of the latex in the usual film-formation. The absence of a change in the concentration at the moment of gelatinization brings about the condition, whereby the fact of gel formation proper does not affect the relationship of the electric resistance to the moisture content in the system. There are 6 graphs, 2 diagrams and 6 references: 5 Soviet, 1 English. X

ASSOCIATION: Moskovskiy institut tonkoy khimicheskoy tekhnologii im. M. V. Lomonosova (Moscow Institute of Fine Chemical Technology im. M. V. Lomonosov)

Card 4/7

20065

S/138/61/000/003/005/006
A051/A129

The effect of the gelatinization process of...

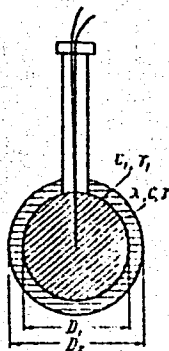


Figure 1:

Diagram of a spherical
bialorimeter

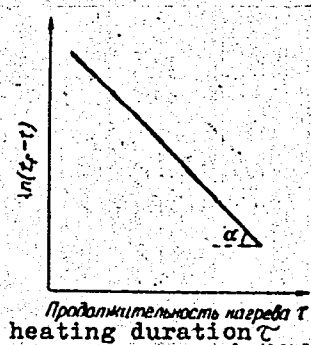


Figure 2:

Relationship of $\ln(t_f - t)$ to the heating
duration

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20865

S/138/61/000/003/005/006
A051/A129

The effect of the gelatinization process of...

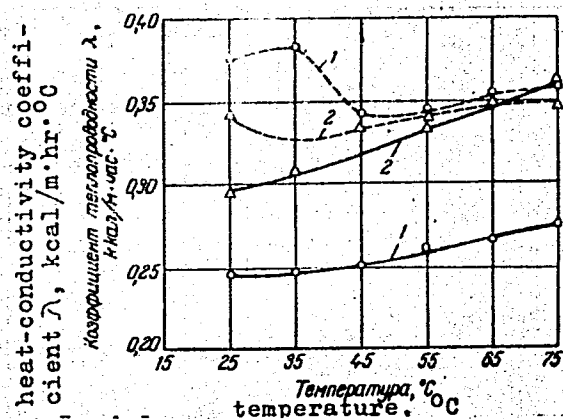


Figure 3:

Relationship of the heat-conductivity to the temperature:

- latex,
- - - gelatinizing latex mixture
- 1 - revertex,
- 2 - latex L-7.

Card 6/7

The effect of the gelatinization process of...

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S/138/61/000/003/005/006
A051/A129

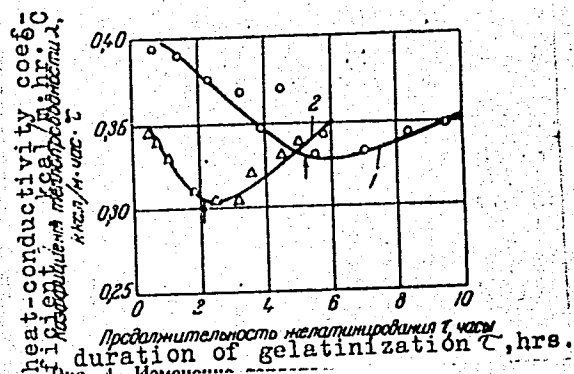


Figure 4: Change in the heat-conductivity during gelatinization of revertex and latex L-7 (the arrow indicates the movement of gelatinization):
1 - revertex (40%), 2 - latex L-7 (41.5%).

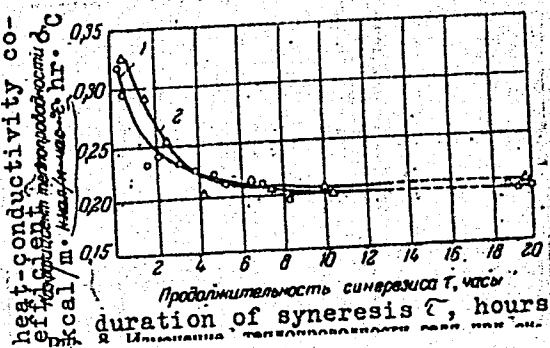


Figure 8: Change of the heat-conductivity of the gel in syneresis:

1 - revertex (40%),
2 - latex (38%).

Card 7/7

S/069/614023/001/006/009

B14/B204

AUTHORS: Sandomirskiy, D. M. and Korotkova, A. A.

TITLE: Investigation of latex foams

PERIODICAL: Kolloidnyy zhurnal, v. 23, no. 1, 1961, 95-99

TEXT: In this paper, the authors present the results of an investigation on the effect of some characteristics of synthetic latices, such as concentration, surface tension, and viscosity, upon the quantity K (ratio of the foam volume to the volume of the liquid phase in it), the dispersion, and the stability of the foams produced mechanically. The quantity K was determined by weighing a certain foam volume and then evaluating the equation $K = V_f/V_l = V_p\gamma_l/g_f$, where V_f denotes the foam volume, V_l the volume of the latex, γ_l the specific gravity of the latex, and g_f the weight of the foam. The dispersion of the foam was ascertained by determining the mean diameter of the gas bubbles from a number of diameters measured on a photograph, wherein the equation

Card 1/8

Investigation of latex foams

S/069/61/023/001/006/009
B 124/B 204

$d_{av} = \sum d_i n_i / \sum n_i$ was employed; the distribution curves are plotted. The stability to formation of layers, the beginning of flow into a calibrated neck of a funnel (τ), the flow velocity (v_1), and the time of separation into layers (v_2) of the latex were determined, too. The mechanical properties of the foam structure were ascertained through tangential shift of a notched plate (Ref. 6) with the device shown in Fig. 1. The notched plate (1) was suspended on string (6) which is laid over block (7). The foam is poured into the planoparallel-walled container (2) on the movable table (3). In the experiment, plate (1) is immersed into the foam by stepwise lifting of table (3); equilibrium is adjusted by weights (8). The plate was pulled out of the foam by the constant load of the weights upon scale (9). The shift of the plate was determined by a microscope (5) on the micro-scale (4). Table 1 illustrates the dependence of the foam properties on the concentration of Nairite J-4 (L-4) latex. K and the stability of the foam decrease with increasing dilution of the latex. The authors also studied the effect of surface tension σ upon the properties of foam of CXC-50H (SKS-50N)-type polyvinylstyrene latex with addition

Card 2/8

S/069/61/023/001/006/009
B024/B204

Investigation of latex foams

of stabilizers (Table 2) and the effect of the viscosity of Nairite L-4 latex with addition of ammonium caseinate on the properties of the foam. The distribution curves of the bubble diameters of latex foams of different viscosity (Fig. 3), the deformation curves of foam from latex of a viscosity of 59 cpoise, and the dependence of the tensile strength of the foam on the time of ageing (Figs. 5,6) are given. There are 6 figures, 3 tables, and 4 references: 3 Soviet-bloc and 1 non-Soviet-bloc.

ASSOCIATION: Nauchno-issledovatel'skiy institut rezinovykh i lateksnykh izdeliy, Moskva (Scientific Research Institute of Rubber and Latex Products, Moscow)

SUBMITTED: July 8, 1959

Card 3/8

Investigation of latex foams

Legend to Table 1: Dependence of the properties of the foam on the concentration of Nairite L-4 latex.

1) Latex concentration, 2) min, 3) ml/min.

S/069/61/023/001/006/009
B424/B(204) ✓

Концентрация латекса, %	K	τ , мин	ν , мл/мин	ν , мл/мин
50	9,2	4,0	1,25	0,06
40	8,0	2,25	1,70	0,25
30	10,0	1,5	1,25	0,40
20	7,9	1,5	1,5	0,6
10	7,0	1,25	2,0	0,8

Table 1

Legend to Table 2: Dependence of the properties of the foam on the surface tension of the latex SKS-50N. 1) Nekal addition, 2) dyne/cm, 3) cpoise, 4) min, 5) ml/min.

Некаль, %	σ , $\frac{\text{дин}}{\text{см}}$	η , спуз	K	τ , мин	ν , $\frac{\text{мл}}{\text{мин}}$	ν , $\frac{\text{мл}}{\text{мин}}$
0	45,4	4,7	1,7	1,5	2,2	1,0
1	40,4	4,4	3,0	2,8	1,5	0,55
2	37,6	4,3	3,3	2,5	1,75	0,44
3	33,7	4,4	3,8	2,5	1,75	0,44

Table 2

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B124/B204

Investigation of latex foams

Legend to Table 3: Dependence of the properties of the foam on the viscosity of 47% Nairite L-4 latex. 1) Ammonium caseinate, 2) dyne/cm, 3) cpoise, 4) min, 5) ml/min, 6) d_{av} , cm.

Table 3

Казеинат аммоний, % 1	σ , $\frac{\text{дин}}{\text{см}}$ 2	η , спуаз 3	K	τ , мин 4	v_1 , $\frac{\text{мл}}{\text{мин}}$ 5	v_2 , $\frac{\text{мл}}{\text{мин}}$ 5	d_{cp} , см 6	\bar{d}_{av} , см 3
0	36,0	7,4	8,5	2,9	2,5	0,44	0,019	
0,5	36,8	12,4	7,2	10,7	0,5	0,08	0,017	
1,0	36,8	31,0	6,2	22,0	0,14	0,05	0,016	
1,25	36,8	59,0	5,0	63,0	0,02	0	0,015	

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Investigation of latex foams

Legend to Fig. 3: Distribution curve of the bubble diameters of foams from latices of different viscosity (cpoise).
 1) 7.3; 2) 12.8, 3) and 4) 59.
 a) diameter of the foam bubbles, mm.

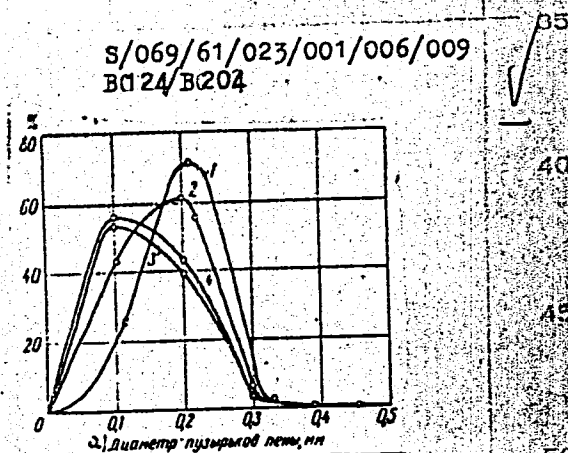


Fig. 3

Investigation of latex foams

Legend to Fig. 4: Kinetic deformation curves of foam from latex having a viscosity of 59 cpoise, a) mm, b) min.

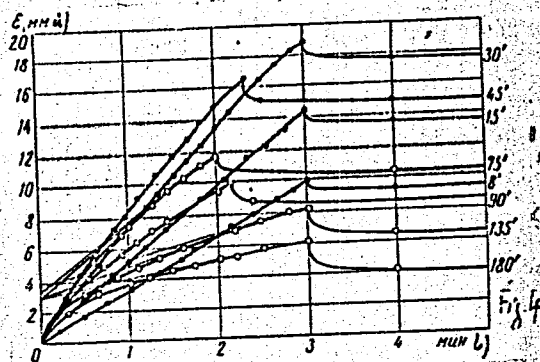


Fig. 4

Investigation of latex foams

Legend to Fig. 5: Dependence of the tensile strength of the foam on the time of ageing $\eta_{lat} = 59$ cpoise.

- a) Viscosity of the foam $\eta \cdot 10^4$ dyne.sec/cm²,
- b) time of ageing of the foam, min..

Legend to Fig. 6: Dependence of the tensile strength of the foam on the time of ageing: η_{lat} 1) = 7.4, 2) = 12.8 cpoise. a) Viscosity of the foam $\eta \cdot 10^4$ dyne.sec/cm², b) time of ageing of the foam, min.

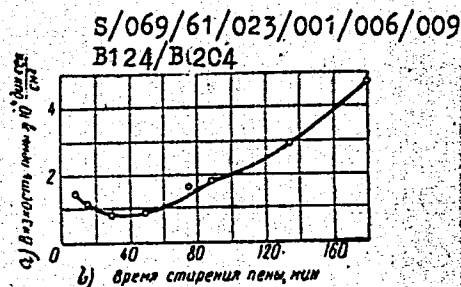


Fig. 5

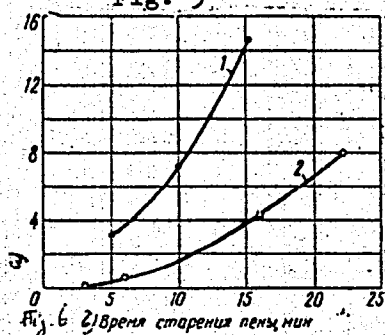


Fig. 6

Card 8/8

SPEKTOR, E.M.; SANDOMIRSKIY, D.M.

Vulcanization of polychloroprene latexes. Part 3: Effect of
hydrolysis on ionic deposition. Vysokom.soed. 3 no.8:1181-1186
Ag '61. (MIRA 14:9)

1. Moskovskiy institut tonkoy khimicheskoy tekhnologii imeni
M.V.Lomonosova i Zavod Krasnyy bogatyr'.
(Chloroprene)

SANDOMIRSKIY, D.M.; PIL'MENSHTeyN, I.D.; KHMEL'NITSKAYA, N.Ye.

Gelation of latex by means of finely dispersed suspensions. Kauch.
i rez. 20 no.7:5-8 J1 '61. (MIRA 14:6)

1. Moskovskiy institut tonkoy khimicheskoy tekhnologii imeni
M.V.Lomonosova.

(Latex) (Suspensions (Chemistry))

S/138/62/000/010/006/008
A051/A126

AUTHORS: Korotkova, A.A., Sandomirskiy, D.M., Shepeleva, T.G.

TITLE: Properties of natural latex foam

PERIODICAL: Kauchuk i rezina, no. 10, 1962, 47 - 50

TEXT: Results of an investigation of foam formation and natural latex foam properties are submitted. Effects of concentration, viscosity, and surface tension of latex on the properties of produced foams were studied. The effect of ammonia content, thermal aging and additions of surface-active substances on the properties of qualitex natural latex was investigated. Surface tension of the latex was determined according to the ring removal method. The viscosity was measured on the Heplar viscosimeter. The foam formation activity of the latex is expressed through vt (v - volume of the foam, formed by pneumatic foaming over a period of time t , prior to the beginning of bubble formation). Dilution of the qualitex sharply reduces its viscosity and slightly increases its surface tension. Its foam-forming activity correspondingly drops, the multiplicity increases and the resistance to mechanical foam lamination decreases.

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S/138/62/000/010/006/008
A051/A126

Properties of natural latex foam

The removal of the ammonia to a value of $\text{pH} = 8.5$ does not change the qualitex. At $\text{pH} < 8.5$, the latex viscosity sharply increases. The surface tension and foam-forming activity of the qualitex increases slightly. The foam multiplicity does not change, the resistance to lamination drops sharply, and the latex serum exfoliates. The introduction of surface-active substances does not considerably alter the qualitex pH; all these substances, excepting ammonium caseinate, in dosages of up to 0.5%, first sharply and then slightly reduce the surface tension and increase the qualitex viscosity. The foam-forming activity is reduced by the surface-active substances with the exception of non-ionized ОП-10 (OP-10). The latter increases viscosity and, correspondingly, the foam-forming activity. The tested substances were arranged in the following sequence, according to optimum properties which they give to the qualitex: $\text{ПТ} < \text{ПК} < \text{ОП} -10 < \text{ПК} < \text{РТ}$ and КА ($\text{ПТ} < \text{ПК} < \text{ОП} -10 < \text{РТ}$ and КА); the foam-forming activity, multiplicity and mechanical foam resistance, taken as the main indices. The most favorable properties are obtained with triethanolamine paraffinate. Thermal aging of the qualitex causes after 7 days the surface tension to increase; after 3 days, the viscosity. Certain physico-chemical law sequences are experimentally confirmed, and it is further concluded that there is also an optimum viscosity value for

Card 2/3

Properties of natural latex foam

S/138/62/000/010/006/008
A051/A126

natural latex, lying within the range of 35 - 50 cP. There are 7 figures and 3 tables.

ASSOCIATION: Nauchno-issledovatel'skiy institut rezinovykh i lateksnykh izdeliy i Moskovskiy institut tonkoy khimicheskoy tekhnologii im. M.V. Lomonosova (Scientific Research Institute of Rubber and Latex Articles and Moscow Institute of Fine Chemical Technology im. M.V. Lomonosov)

Card 3/3

S/138/62/000/012/003/010
A051/A126

AUTHORS: Sandomirskiy, D. M., Pil'menshteyn

TITLE: Structural and mechanical property changes of rubber latexes in sodium fluosilicate gelatinization

PERIODICAL: Kauchuk i rezina, no. 12, 1962, 6 - 11

TEXT: Two commercial latexes were studied: Qualitex (Kvaliteks) - 60% concentrate of natural latex produced by centrifuging, and nairite Л-4 (L-4), concentrated to 55%. The quantity effect of the protective substance at the globule surface on the rate of gelatinization and on the mechanical properties of the latex structures forming in the gelatinization process was investigated. Experimental data showed that for latexes protected with ammonium oleate, P_i (the degree of saturation of the adsorption globule bubbles) has very little effect on the duration of the gelatinization, regardless of the nature of the gelatinizing agent. This also applies to potassium-colophony soap, as the stabilizing agent of the latex. Theoretical and calculated data on the effect of the protective substance quantity in the latex, and the degree of globule-surface

Card 1/2

Structural and mechanical property changes of...

S/138/62/000/012/003/010
A051/A126

coverage by the substance showed that the nature of the protective substance plays the major role. Conclusions: The changes in structural and mechanical properties of natural and synthetic latexes, occurring in gelatinization with sodium fluoro-silicon, are in many ways similar to those occurring in gelatinization with zinc oxide in the presence of ammonium salts. With an increase in latex concentration, gelatinizing agent, temperature and pH, the rate of gelatinization and the tensility of the formed structures, are elevated. At low temperatures, the rate of gelatinization is assumed to be determined by the rate of formation of the astabilizing ions; with an increase in temperature, the rate of gelatinization depends on the rate of the diffusion processes. The effect of the saturation degree of the protective globule bubbles on the rate of gelatinization does not depend on the nature of the gelatinizing agent: it is rather determined by the nature of the protective substances. There are 7 figures. ✓

ASSOCIATION: Moskovskiy institut tonkoy khimicheskoy tekhnologii im. M. V. Lomonosova (Moscow Institute of Fine Chemical Technology, im. M. V. Lomonosov)

Card 2/2

SANDOMIRSKIY, D.M.; KARPOV, V.L.; YURKEVICH, V.G.

Radiation vulcanization of rubber in latex. Vysokom.sced.
4 no.7:1064-1070 J1 '62. (MIRA 15:7)

1. Moskovskiy institut tonkoy khimicheskoy tekhnologii imeni
Lomonosova i Fiziko-khimicheskoy institut imeni Karpova.
(Rubber, Synthetic)
(Vulcanization)

3/138/62/000/001/005/009
A051/A126

AUTHORS: Shepelev, M.I.; Sandomirskiy, D.M.; Chernaya, V.V.; Trofimovich, D.P.

TITLE: Aging of chloroprene latex

PERIODICAL: Kauchuk i rezina, ^{1/}no. 1, 1962, 19 - 23

TEXT: An investigation was carried out on the processes and changes taking place in latexes during their production and subsequent transportation. The property changes of the gels and vulcanized films were studied. Serial production chloroprene latex JL-7 (L-7) was chosen for the experiments, involving fast aging and storage under natural conditions. Data on the former are submitted. The colloido-chemical properties of the latex were evaluated according to: pH-value, alkalinity, dry-substance content, surface tension, viscosity, degree of globule bubble saturation and particle size. The physico-mechanical properties of the raw gel were determined according to the dimetric deformation method by gel expansion, using a special instrument (Fig. 1). The physico-mechanical properties of the vulcanized films were determined according to GOST 270-53. The equilibrium index was calculated according to the NIIRP method. The experi-

Card 1/3₂

Aging of chloroprene latex

S/138/62/000/001/005/009
A051/A126

ments showed that in aging, the latex properties change, both in the colloidal system as well as to polymer properties. The aging decreases the surface tension, increases the rate of ionic deposit and moduli of the dimetric gel expansion, it decreases its tensility and relative elongation, reduces the residual elongation and increases the vulcanized film modulus. The technological properties of the latex in aging deteriorate. The aging of the chloroprene latex as a colloidal system is associated with the aggregation of globules. Structuralizing of the polymer takes place due to aging of the chloroprene latex. There are 2 tables and 2 figures. ✓

ASSOCIATION: Nauchno-issledovatel'skiy institut rezinovykh i lateksnykh izdeliy
(Scientific Research Institute of Rubber and Latex Articles)

Card 2/32

38049
S/069/62/024/003/005/006
B110/B138

26.1610

AUTHOR: Sandomirskiy, D. M.

TITLE: Reaction of latexes with electrolytes

PERIODICAL: Kolloidnyy zhurnal, v. 24, no. 3, 1962, 320 - 322

TEXT: An addition of electrolyte to latex stabilized by ion-forming substances causes two processes: (1) Reduction of the ζ -potential owing to an increase in the ion concentration in the latex and (2) conversion of the stabilizers into substances insoluble in water. Fast electrolyte addition yields a concentration of ions with opposite signs, which causes compression of globules in the diffuse layer and lowering of the ζ -potential. The lower the number of cations reacting with the protective substance adsorbed by the globule surface, the faster the process. The ions gradually diffuse into the latex from the surface of the gelling agent particles. This upsets the stability of the globules causing every particle to be covered with a coagulum layer, giving rise to a reticular structure. Zinc oxide forms bivalent zinc ammonium ions and sodium silicofluoride forms hydrofluoric acid. Destabilized ions react completely with the protective substances.

Card 1/2

Reaction of latexes ...

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B110/B138

tance, whereas the diffusion layer is not compressed and the ξ -potential does not decrease. Conversion of the ion-forming protective layer into a compound insoluble in water leads to a sharp decrease in the number of potential-forming ions and reduces the surface charge of globules to almost zero (neutralization coagulation). Thus, the destabilization mechanisms of coagulation and gelation are different, and the ionic deposition holds an intermediate position. ✓

ASSOCIATION: Moskovskiy institut tonkoy khimicheskoy tekhnologii im. M. V. Lomonosova, Laboratoriya elastomerov (Moscow Institute of Fine Chemical Technology imeni M. V. Lomonosov, Laboratory of Elastomeres)

SUBMITTED: July 1, 1961

Card 2/2

PANICH, R. M.; KIREYTSEV, V. V.; SANDOMIRSKIY, D. M.; VOYUTSKIY, S. S.

Properties of latexes obtained with the use of nonionic stabilizers. Part 1: Properties of polychloroprene latexes as dependent on the type of stabilizer, pH of the medium, and the presence of electrolytes. Koll. zhur. 24 no.6:733-737 N-D '62. (MIRA 16:1)

1. Moskovskiy institut tonkoy khimicheskoy tekhnologii imeni Lomonosova.

(Chloroprene) (Colloids)

KARPOV, V.L., SANDOMIRSKIY, B.M., YURKEVICH, V.G., SERGETEV, N.M.

"Effect of gamma irradiation on natural and synthetic latexes."

Report submitted to the Conference on the Application of Large Radiation Sources
in Industry Salzburg, Austria 27-31 May 1963

8/138/63/000/003/002/008
A051/A126

AUTHORS: Spektor, E. M., Sandomirskiy, D. M.

TITLE: Hydrolyzed chloroprene rubber in rubber mixes

PERIODICAL: Kauchuk i rezina, no. 3, 1963, 5 - 8

TEXT: Tests were conducted with the addition of structuralizing polymers to rubber mixes with the purpose of improving the technical properties of the latter. The authors used hydrolyzed chloroprene rubber, nairite ЖГ (LG) as the structuralizing polymer. The latter was produced by heating serial chloroprene latex Ж-4 (L-4) for 6 - 8 hours, at 90°C, in the presence of 2 weight parts of KOH (to 100 w.p. of rubber in the latex). The LG nairite was mixed with natural, isoprene, butadiene-styrene and chloroprene (nairite B) rubbers, and it was noted that best results are obtained for compatibility when natural and chloroprene rubbers are used. The results of the experiments with these rubbers are submitted: in the case of mixes based on LG nairite and natural rubber, it was established that the following conditions are needed to create a single spatial lattice which, in turn, would result in the best rubber properties: a) unity

Card 1/2

Hydrolyzed chloroprene rubber in rubber mixes

S/138/63/000/003/002/008
A051/A126

of the transverse bonds and with that of the vulcanizing agent for both rubbers;
b) synchronization of the vulcanization kinetics of both components in the rubber mix. It was concluded that in the hydrolysis of chloroprene rubber in the latex, conditions of covulcanization with natural rubber are improved. When replacing part of the chloroprene rubber (nairite B) by nairite LG in mixes with a large quantity of softener, the technological properties of the raw rubber mixes and the physico-mechanical properties of the vulcanizates are improved. If LG nairite is introduced into the mix based on NR, the setting of the mixes is reduced after calandering. The physico-mechanical properties of the vulcanizates come close to those of vulcanizates based on natural rubber alone. There are 3 tables and 3 figures.

ASSOCIATION: Moskovskiy institut tonkoy khimicheskoy tekhnologii im. M. V. Lomonosova i zavod "Krasnyy bogatyr'" (The Moscow Institute of Fine Chemical Technology im. M. V. Lomonosov and the "Krasnyy bogatyr'" Plant)

Card 2/2

SANDOMIRSKIY, D.M.; PIL'MENSHTeyN, I.D.; Prīnimal uchastiye: YENGOVATOV,
A.A.

Changes occurring in the structural and mechanical properties
of rubber latexes during gelatination with sodium fluosilicate.
Kauch.i rez. 21 no.12:6-11 D '62. (MIRA 16:1)

1. Moskovskiy institut tonkoy khimicheskoy tekhnologii im.
M.V.Lomonosova.

(Latex—Testing)

(Fluosilicates)

SHEPELEV, M.I.; TROFIMOVICH, D.P.; SANDOMIRSKIY, D.M.; MAYZELIS, B.A.

Investigating the properties of the gels from chloroprene L-7
latex. Kauch. i rez. 22 no.8:27-32 Ag '63. (MIRA 16:10)

1. Nauchno-issledovatel'skiy institut rezinovykh i lateksnykh
izdeliy.

L 25739-65 EPF(c)/EWP(j)/EWT(m) Pc-4/Pr-4 RM S/0069/63/025/003/0291/0298
 ACCESSION NR: AP3001567

AUTHOR: Geller, T. I.; Sandomirskiy, D. M.; Ustinova, Z. M.; Fodiman, N. M.; Dogadkin, B. A. 25
 19
 6
 B

TITLE: Certain features of the vulcanization of rubber in latex form

SOURCE: Kolloidnyy zhurnal, v. 25, no. 3, 1963, 291-298

TOPIC TAGS: rubber vulcanization, latex, rubber research, rubber mixture

ABSTRACT: Since the addition of sulfur to rubber in latex may occur as a result of the collision of rubber globules, dispersed sulfur particles, and zinc oxide, all the factors which increase the number of such collisions or their efficiency should accelerate the vulcanization of rubber in the latex: This article shows the results of investigation of the effect of concentrating vulcanizing agents, the rate of stirring, temperature, the properties of globule protective layers and the order of addition of ingredients. The work was conducted with natural latex concentrate produced by centrifuging and stabilized with ammonia. The content of solid was 60.2%, pH=10.45 and the surface tension was 45.1 dynes/cm. ZnO and S were introduced into the latex in the form of aqueous suspensions. Vulcanization was carried out in a closed flask in a 70° C water bath. It was found that with

Card 1/2

L 25739-65

ACCESSION NR: AP3001567

an increase in the concentration of sulfur and ZnO in the latex mixture the rate of vulcanization increases. An increase in the concentration of water soluble accelerator (sodium diethyldithiocarbamate) has practically no effect on the rate of vulcanization. At a certain value, more intense stirring of the latex mixture leads to acceleration of vulcanization. An increase in temperature increases the vulcanization rate. Vulcanization is accelerated with a decrease in the thickness of the globule protective layer. Zinc oxide reacts with serum components in the latex mixture, forming rubber soluble substances which in turn accelerate the addition of sulfur. The addition proceeds faster in latex than in a dry film of the same composition. The formation of space lattice occurs at early stages of vulcanization. It is concluded that all factors which enhance the number of collisions of particles in the latex mixture and the efficiency of their collisions as well as aid the transfer of vulcanizing agents into rubber soluble substances accelerate vulcanization. Orig. art. has: 7 figures.

ASSOCIATION: Moskovskiy institut tonkoy khimicheskoy tekhnologii im. M. V. Lomonosova (Moscow Institute of Fine Chemical Technology)

SUBMITTED: 30Dec62

ENCL: 00

SUB CODE: MT, GC

NO REF SOV 1024

OTHER: 002

Card 201

PANICH, R.M.; FEY KHUN-LYAN [Fei Hung-liang]; SANDOMIRSKIY, D.M.;
VOYUTSKIY, S.S.

Compatibility of rubbers in latex films. Koll. zhur. 25
no.4:455-458 J1-Ag '63. (MIRA 17:2)

1. Moskovskiy institut tonkoy khimicheskoy tekhnologii imeni
Lomonosova.

TUMANOV, A.T., glav. red.; VIATKIN, A.Ye., red.; GARBAR, M.I., red.; ZAYMOVSKIY, A.S., red.; KARGIN, V.A., red.; KISHKIN, S.T., red.; KISHKINA-RATNER, S.I., doktor tekhn. nauk, red.; PANSIN, B.I., kand. tekhn. nauk, red.; ROGOVIN, Z.A., red.; SAZHIN, N.I., red.; SKLYAROV, N.M., doktor tekhn. nauk, red.; FRIDLYANDER, I.N., doktor tekhn. nauk, red.; SHUBNIKOV, A.V., red.; SHCHERBINA, V.V., doktor geol.-miner. nauk, red.; SHRAYBER, D.S., kand. tekhn. nauk, red.; GENEL', S.V., kand. tekhn. nauk, red.; VINOGRADOV, G.V., doktor khoz. nauk, red.; NOVIKOV, A.S., doktor khoz. nauk, red.; KITAYGORODSKIY, I.I., doktor tekhn. nauk, red.; ZHEREBKOV, S.K., kand. tekhn. nauk, red.; BOGATYREV, P.M., kand. tekhn. nauk, red.; SANDOMIRSKIY, D.M., D.M., kand. tekhn. nauk, red.; BUROV, S.V., kand. tekhn. nauk, red.; POTAK, Ya.M., doktor tekhn. nauk, red.; KUKIN, G.N., doktor tekhn. nauk, red.; KOVALEV, A.I., kand. tekhn. nauk, red.; YAMANOV, S.A., kand. tekhn. nauk, red.; SHEFTEL', I.A., kand. khoz. nauk, st. nauchn. red.; BABERTSYAN, A.S., inzh., nauchn. red.; BRAZHNKOVA, Z.I., nauchn. red.; KALININA, Ye.M., mlad. red.; SOKOLOVA, V.G., red.-bibliograf; ZENTSEL'SKAYA, Ch.A., tekhn. red.

[Building materials; an encyclopedia of modern technology] Konstruktsionnye materialy; entsiklopediia sovremennoi tekhniki. Glav. red. A.T.Tumanov. Moskva, Sovetskaia entsiklopediia. Vol.1. Abliatsiia - korroziia. 1963. 416 p. (MIRA 17:3)

1. Chlen-korrespondent AN SSSR (for Kishkin).

USTINOVA, Ye.T.; SANDOMIRSKIY, D.M.; KOMOVKINA, N.S.

Improved technology of the manufacture of nonwoven interlining
fabrics. Nauch.-iss. trudy TSNIKHBI za 1962 g.:303-315 '64.
(MIRA 18:8)

PANICH, R.M.; KONOVALOVA, N.V.; GONSOVSKAYA, T.B.; SANDOMIRSKIY, D.M.;
VOYUTSKIY, S.S.

Properties of latexes prepared with the aid of nonionic
stabilizers. Part 2: Butadiene-styrene latexes. Koll. zhur.
27 no.4:589-592 J1-Ag '65. (MIRA 18:12)

1. Moskovskiy institut tonkoy khimicheskoy tekhnologii imeni
M.V. Lomonosova. Submitted March 7, 1964.

USTINOVA, Z.M.; FODIMAN, N.M.; GELLER, T.I.; SANDOMIRSKIY, D.M.; DOGADKIN, B.A.

Some particular features of the vulcanization of rubbers as latexes.
Part 2: Part played by zinc oxide and by protective substances. Koll.
zhur. 27 no.5:773-779 S-0 '65. (MIRA 18:10)

1. Moskovskiy institut tonkoy khimicheskoy tekhnologii imeni
Lomonosova.

SANDOMIRSKIY, G.B., inzhener.

Selecting a practical type of a crane for placing concrete. Gidr.stroi.
22 no.6:7-11 Je '53. (MLBA 6:6)
(Cranes, derricks, etc.)

SANDOMIRSKIY, Georgiy Borisovich; STANKYEV, Boris Mikhaylovich; BEKERMEN, Roman Yefimovich; SUZANOVICH, Dmitriy Frantsevich; KANDALOV, I.I., professor, redaktor; OBRIZKOV, S.S., redaktor; SKVORTSOV, I.M., tekhnicheskiy redaktor.

[Handbook of construction equipment for use in hydroelectric power plant construction] Spravochnik stroitel'nogo oborudovaniia dlia gidroenergeticheskogo stroitel'stva. Moskva, Gos. energ. izd-vo, 1954. 287 p. (MIRA 8:2)
(Hydraulic engineering) (Building machinery)

SANDOMIRSKIY, G.B., inzhener.

Consultation on winter concrete work on large hydrotechnical
constructions. Gidr.stroi.23 no.1:47 '54. (MLRA 7:2)
(Concrete construction--Cold weather conditions)

SANDOMIRSKIY, G.B., inzhener; BEKKERMAN, R.Ye., inzhener.

~~CONFIDENTIAL~~
Conference of experts in the mechanization of hydrotechnical construction
work. Gidr.stroi. 23 no.3:42-43 '54. (MIRA 7:6)
(Hydraulic engineering)

①
L 20995-66 EWT(m)

ACCESSION NR: AP5019038

UR/0286/65/000/012/0069/0069
69.057.528

AUTHOR: Vorob'yev, A. I.; Ivanovskiy, G. V.; Komarov, A. K.; Tsikhona, V. A.;
Sandomirskiy, G. B.; Rubinshteyn, G. V. 10 B

TITLE: A device for preparing concrete forms. Class 37, No. 172020¹⁵

SOURCE: Byulleten' izobreteniy i tovarnykh znakov, no. 12, 1965, 69

TOPIC TAGS: concrete structure, concrete, structural concrete, construction method

ABSTRACT: This Author's Certificate introduces a device for preparing concrete forms. The device is used when the blocks which make up a structure are being joined into a monolithic unit. The apparatus includes a panel which covers the joint, and a clamping attachment. Assembly and disassembly are simplified by making the clamping attachment in the form of a support and pneumatic tubes. The tubes are located between the support and the panel and are drawn together by rods. During setup, the free ends of the rods are connected with support girders located on the other side of the joint. These support girders remain in the structure after the blocks are joined into a single monolithic unit.

Card 1/3

L 20995-66
ACCESSION NR: AP5019038

ASSOCIATION: none

SUBMITTED: 07May63

NO REF SOV: 000

ENCL: 01

OTHER: 000

SUB CODE: 60

Card 2/3

L 20995-66

ACCESSION NR: AP5019038

ENCLOSURE: 01

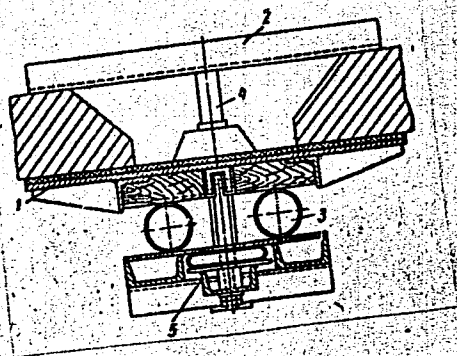


Fig. 1. 1--panel; 2--support;
3--pneumatic tube; 4--rod;
5--support girder

Card 3/3

BK

SANDOMIRSKIY, G.M., inzh.

"Seamless" heat insulating method for piping systems. Biul. stroi.
tekh. 12 no.1:20 Ja '55. (MIRA 11:12)

1. Trest Stroytermoizolyatsiya. (Pipe)
(Insulation (Heat))

SANDOMIRSKIY, I. A.

PA-2T22

USSR/Oil Industry - Compressor
Stations

Mar 1947

Gas Turbines

"Gas Turbines for Compressor Stations of the Oil
Industry," I A Sandomirskiy, 6 pp

"Energeticheskiy Byulleten" No 3

Arguments illustrated with statistical tables and
schematic diagrams to show superiority of the gas
turbine over other engines for the purpose.

2T22

SANDOMIRSKIY, I.

Purification of water in heating boilers. Nev.neft.tekh.:Bur.
no.3:[1[0.2]:8 '48. (MLRA 9:4)
(Boilers) (Oil fields--Equipment and supplies)

SANDOMIRSKIY, I.

Preparation used to counteract the formation of boiler scale.
Nov.neft.tekh.:Bur.no.4:6 '48. (MIRA 9:4)
(Boilers--Incrustations)

SANDOMIRSKIY, I. A.

"Tests on a Gas Turbine Using the Closed Cycle Method, Swiss" Vest. Inzhenerov, i Tekhnikov, No. 4, 1948, Engineer.

SANDOMIRSKIY, I. A.

PA 61T35

USSR/Engineering
Combustion
Fuels, Liquid

Mar 1948

"Combustion of Gaseous and Liquid Fuel by the Flameless Surface Combustion Method," I. A. Sandomirskiy, GlavVostokEnergNeft', 4 pp

"Energeticheskiy Byulleten'" No 3

Discusses method of flameless combustion, showing several cross section diagrams of installations used. In future, natural gas will play a more important role as a fuel for enterprises, necessitating inauguration of a new technique of combustion in industries concerned.

61T35

SANDOMIRSKIY, I. A.

PA 10/49TH4

USSR/Engineering
Turbines, Gas
Compressors, Centrifugal

Aug 48

"Gas-Turbine Unit Equipped With a New Type Centrifugal Compressor," I. A. Sandomirskiy, GlavVostok-EnergoNeft, 2 3/4 pp

"Energet Byul" No 8

Describes centrifugal compressor fitted to gas turbine generator in Zurich. Taken from an article in "Power", Dec 47.

10/49TH4

САНТ/СМИРОКІЙ, І. А.

PA 54/49745

Удосконалення
систем
очистки конденсату

№ 18

"Енергетик" № 11

Методи збільшення конденсатного повернення в котельні, І. А. Бандрицький, "Енергопроект" (Повітряна Комісія для Палива Інд), 4 pp

At present, condensate recovery in boilers in a majority of enterprises comprises only about 20-30% of the steam required by these enterprises. Reason for this low return is contamination of the condensate by oils and gasoline. Briefly reviews specifications for the quality of the recovered condensate in boilers and discusses methods of mechanical, coagulation, and sorption purification.

54/49745

SANDMIRSKIY, I. G.

"On the Method of Fitting Pobedite Tips to the Tool Shank," Stanki i Instrument 10, No. 4, 1939, Engineer.

Report U-1505, 4 Oct. 1951.

SANDOMIRSKIY, I.G.

Vybor ratsional'nykh rezhimov rezaniia pri shlifovanii. Moskva, Gizlegprom, 1946. 59. (1) p. diagrs., tables.

Bibliography: p. (60).

Selecting efficient cutting methods during grinding operations.

DLC: TJ1280.S3

SO: Manufacturing and Mechanical Engineering in the Soviet Union, Library of Congress, 1953.

SANDOMIRSKIY, I.G.

Ratsional'noe ispol'zovanie metallovezhushchikh instrumentov. Moskva, Mashgiz, 1946. 295 p. deagrs., tables.

Bibliography: p. (294)

Efficient utilization of metal-cutting tools.

DLC: TJ1230.S28

SO: Manufacturing and Mechanical Engineering in the Soviet Union, Library of Congress, 1953.

SANDOMIRSKIY, I., inzhener.

History of the drill bit. Tekh.mol.23 no.3:24-25 Mr '55.
(Drilling and boring machinery) (MIRA 8:4)

Sandomirskiy, I.G

SANDOMIRSKIY, I.G., inzhener.

~~Universal machine tool.~~ Nauka i zhizn' 23 no.6:49 Je '56.

(MLRA 9:9)

(Machine tools--Electric driving)

SANDOMIRSKIY, I., inzhener.

Ceramic cutting tools. Tekh.mol. 24 no.11:18 N '56. (MLRA 9:12)
(Cutting tools)

SANDOMIRSKIY, I., inzh.

~~Two pages in~~ album. IUn. tekhn. 2 no.9:52-55 S '57. (MLRA 10:9)
(Machine tools)

SANDOMIRSKIY, I., inzh.

Biography of cutting tools. IUn.tekh. 2 no.6:40-42 Je '58.

(MIRA 11:6)

(Cutting tools)

SANDOMIRSKIY, I.G., inzh. (Moskva)

Regrinding hard alloy cutting tools. Politekh. obuch. no.8:21-25
Ag '58. (MIRA 11:9)
(Cutting tools)

SANDOMIRSKIY, I.G., inzh.

The 1K62 lathe. Rech. transp. 17 no. 6:23-25 Je '58. (MIRA 11:7)
(Lathes)

SANDOMIRSKIY, I., inzh.

Pages from the biography of the cutting tool. IUn.tekh. 4
no.12:18-20 D '59. (MIRA 13:4)
(Metal-cutting tools)

SANDOMIRSKIY, I., inzh.

Development of the drill. IUn.tekh. 3 no.4:26-27 Ap '59.

(MIRA 12:4)

(Drilling and boring machinery)

S/117/60/000/006/008/010
A004/A002AUTHOR: Sandomirskiy, I.G.TITLE: The Novikov Gearing ✓

PERIODICAL: Mashinostroitel', 1960, No. 6, pp. 30-31

TEXT: The author presents a historical outline of the development of geared drives, starting with Archimedes, and points out that up to recent times, gears with involute gear tooth profile distinguished themselves by simplicity and accuracy of manufacture, cheapness and compactness. The increased demands which are made nowadays concerning high load properties, in connection with increased capacities and high speeds of mechanisms, causes involute gears to fall short of requirements. The author then compares the new geared drive, developed 1955 by the Soviet scientist M.L. Novikov, and points out that the Novikov gearing is a spatial skew bevel gear, of which one toothed wheel has a concave tooth profile while the other wheel possesses a convex tooth profile. In contrast to involute gears, the contact area between the teeth of the Novikov gearing does not shift over the depth of teeth but over the whole length (over the width of the gear rim). Therefore, the contact area surface of Novikov gears is con-

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The Novikov Gearing

S/117/60/000/006/008/010
A004/A002

siderably larger than that of involute gears, which to a great extent reduces contact stresses and increases the load capacities of the gearing. Thus it is possible, given the same dimensions and strength of teeth as of involute gears, to double or treble the force of Novikov gearings, while wear and dynamic loads are reduced. The author presents some details on the manufacture and application of Novikov gearings and states some cases when the use of these gearings is not expedient. There are 3 figures. ✓

Card 2/2

ZHIDELEV, Mikhail Aleksandrovich, starshiy nauchnyy sotr.; BEL'BURT, B.Ye.; PROTASOVSKIY, G.A.; FIGANOV, I.S.; Prinimali uchastiye: KOVAL'SKIY, M.I.; SANDOMIRSKIY, I.G.; GIMRANOV, M.V.; TSIKALOV, V.A., red.; POLUKAROVA, Ye.K., tekhn. red.

[Secondary school production training in mechanical engineering]
Proizvodstvennoe obuchenie v srednei shkole po mashinostroitel'-
nym professiiam; metodicheskoe posobie dlia prepodavatelei i in-
struktorov proizvodstvennogo obucheniia. Pod red. M.A.Zhideleva.
Moskva, Izd-vo APN RSFSR, 1962. 141 p. (MIRA 15:12)
(Technical education)

SANDOMIRSKIY, I., inzh.

Pages from the biography of grinding machines. IUn.tekh. 5 no.9:
42-44 S '60. (MIRA 13:10)
(Grinding machines)

ACC NR: AP7005232

(A)

SOURCE CODE: UR/0145/66/000/009/0103/0107

AUTHOR: Koval', I. A. (Candidate of technical sciences); Sandomirskiy, M. G. (Candidate of technical sciences); D'yachenko, V. G. (Candidate of technical sciences); Ledovskiy, V. I. (Engineer)

ORG: Kharkov Institute of Mechanization and Electrification of Agriculture
(Khar'kovskiy institut mekhanizatsii i elektrifikatsii sel'skogo khozyaystva)

TITLE: Some results from an investigation of the working process of a tractor diesel during operation on diesel fuel and gasoline

SOURCE: IVUZ. Mashinostroyeniye, no. 9, 1966, 103-107

TOPIC TAGS: diesel engine, tractor, engine fuel system, diesel fuel, gasoline

ABSTRACT: The authors study the effect of two-phase fuel input on the dynamics of the combustion process and on the indicated characteristics of diesel engines as a basis for developing multifuel engines. A single-cylinder section of the SMD-14N tractor engine was studied with operation on diesel fuel and A-66 gasoline using two fuel pumps so that the fuel may be fed into the combustion chamber or intake accumulator in any phase with respect to TDC. Fuel feed into the intake accumulator was fixed to give constant delivery at a crankshaft speed of 178 rad/sec. With a variation in load-

Card 1/2

UDC: 621.436

ACC NR: AP7005232

ing at constant crankshaft velocity, the relative quantity of additional fuel ϕ was varied by changing the quantity of primary fuel fed into the combustion chamber:
 $\phi = G_{\text{add}} / (G_{\text{rel}} + G_{\text{add}}) 100\%$. It was found that if small quantities of additional fuel are fed into the intake accumulator ($\phi = 10-15\%$ for diesel fuel and $15-20\%$ for gasoline) efficiency is not adversely affected under heavy loading by a considerable reduction in the rigidity of engine operation (the pressure buildup rate may be reduced to $2 \cdot 10^5 - 3 \cdot 10^5 \text{ N/m}^2 \cdot \text{deg}$ with operation on diesel fuel and to $8 \cdot 10^5 - 9 \cdot 10^5 \text{ N/m}^2 \cdot \text{deg}$ with operation on gasoline). The use of composite fuel feed reduces maximum combustion pressure by $2 \cdot 10^5 - 4 \cdot 10^5 \text{ N/m}^2$. The results of this study indicate the theoretical possibility for using fuel with a low cetane number to achieve economic indices presently realizable only with operation on fuel with a high cetane number. Orig. art. has: 4 figures.

SUB CODE: 21/ SUBM DATE: 5Nov65/ ORIG REF: 04/ OTH REF: 01

Card 2/2

L 21404-66 EWT(m)/EWP(f)/T WE
ACC NR: AP6009897 N,A) SOURCE CODE: UR/0413/66/000/004/0089/0089

INVENTOR: Sandomirskiy, M. G.

ORG: none

TITLE: Method for determining fuel-injection advance angle in internal-combustion engines. Class 42, No. 179046

SOURCE: Izobreteniya, promyshlennyye obraztsy, tovarnyye znaki, no. 4, 1966, 89

TOPIC TAGS: internal combustion engine, fuel injection, pressure pickup, fuel injection advance angle, test equipment

ABSTRACT: An Author Certificate has been issued for a method of determining the fuel-injection advance angle in internal-combustion engines with jet-type fuel feed, using a contact-type nozzle pickup for measuring fuel-injection duration and a contact-type pressure pickup for determining TDC (top dead center); these pickups are included in a circuit of electronic instruments which record pickup readings. The magnitude of the injection advance angle is determined by the sequential switch-on of the pressure-pickup contacts during

Card 1/2

UDC: 621.43.038—791.2

L 21404-66

ACC NR: AP6009897

the entire period of fuel injection, and then by the simultaneous switch-on of both pickups, series-connected into the recording-instrument circuit during this measurement.

[LB]

SUB CODE: 21, 13, 14/ SUBM DATE: 25May63/ ATD PRESS: 4221

Card

2/2 ULR

ARSENT'YEV, A.I., kand. tekhn. nauk; PERMYAKOV, R.S.; BORKO, I.A., student; SANDQIRSKIY, K.Ya., student; SHAPURIN, A.V., student

Expansion of mining operations at the Olenogorsk strip mine using multiple-row blasting. Sbor. nauch. trud. KGRI no.15: 60-63 '63. (MIRA 17:8)

1. Nachal'nik Olenegorskogo kar'yera, Krivorozhskiy basseyn (for Permyakov).

SANDOMIRSKIY, M. G.

* The calorimetric method of determining moisture.
M. G. Sandomirskii (Zootekh. Inst., Kharkov). *Zavod-
skaya Lab.* 22, 75-7 (1956).—Instead of the usual method of
moisture detn. by drying at 102-5°, the specific heat of the
sample is detd. The method is based on the much higher
specific heat of H₂O than of other substances, and the
additivity of the specific heat. Calcns. show that with
higher moisture content in the sample, the error decreases
as a hyperbolic function. W. M. Sternberg

Chem

①

Row
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SANDOMIRSKIY, M.G., kand.tekhn.nauk

Effect of the surface of diesel atomizer nozzle holes on fuel
spraying. Nauch. zap. KHIMSKH no. 11 Fak. mekh. sel'khoz. 1:57-
62 '58. (MIRA 14:3)

(Diesel engines--Fuel system)

DVOROVENKO, G.P., kand.tekhn.nauk, dotsent; SANDOMIRSKIY, M.G., kand.tekhn.
nauk, dotsent; PELEPEYCHENKO, I.P., kand.tekhn.nauk

Investigating ventilators of low-powered air-cooled engines.
Nauch. zap. KHIMSKH no.11 Fak. mekh. sel'khoz. 1:99-108 '58.
(MIRA 14:3)

(Tractors---Engines---Cooling)

L 63210-65 EWT(d)/EWT(m)/EWP(f)/T-2/EWE(c)

ACCESSION NR: AP5018524

UE/0304/65/000/004/0094/0097
62-713:621.436

AUTHORS: Sandomirskiy, M. G. (Candidate of technical sciences); Khorooshun, G. A. (Engineer)

TITLE: Investigation of the compound cooling system of the SMD-7 engine

SOURCE: Mashinostroyeniye, no. 4, 1965, 94-97

TOPIC TAGS: internal combustion engine, corrosion, engine cooling system/ SMD 7 engine, Moskvich 403 automobile

ABSTRACT: The purpose of the compound cooling system, as used in SMD-7 engines and in the "Moskvich-403" automobile, is to reduce the corrosion by SO_2 and SO_3 of the pistons and cylinder linings. This is accomplished by shortening the warming-up time and by maintaining the temperature at a higher level. The method consists of circulating the cooling water through the engine head jacket only. The latter is connected to the cylinder cooling jacket by passages for vapor bubbles formed on the outer surface of the cylinder linings. The bubbles condense in the circulating water stream. With the compound system and open radiator, thermal conditions become stabilized within 20 min from starting with Card 1/2

L 63210-65

ACCESSION NR: AP5018524

3
the cylinder lining at 72C (in a conventional system within 15 min and 50C respectively). When the radiator is covered by a curtain the same data are 20 min and 83C (in a conventional system 20 min and 75C respectively). With the compound system the temperature of the water leaving the head jacket was 46C and 67C (50C and 72C respectively with the conventional system). No difference in fuel consumption was observed at full load of 80 hp at 1700 rpm, but at half-load the compound system showed an economy of 10 g/hp hr. There are no difficulties in converting the conventional to a compound system. In discussing engine corrosion, reference is made to an article by V. I. Bel'skikh (Ratsional'naya skhema okhlasheniya dvigateley vmutrennego sgoraniya. "Avtomobil'naya promyshlennost'," 1961, No. 6). Orig. art. has: 2 graphs.

ASSOCIATION: none

SUBMITTED: 00

ENCL: 00

SUB CODE: PR

REF SOV: 001

OTHER: 000

Card 2/2

<p>11 - H</p>	
<p>SANDOMIRSKIY, M.I.</p>	
<p><i>Influence of ephedrine on motor chronaxia. M. I. Sandomirskii (Pavlov Inst. of Evolut. Physiol. and Pathol. of the Higher Nerv. Activity, Koltushi). J. Physiol. (U.S.S.R.) 32, 511-14(1946)(in Russian). Chronaximetric tests were carried out on 12 narcoleptics, 4 neurasthenics, and 6 normal individuals. In 18 of the 24 cases a considerable decrease in rheobase and an 18-60% shortening of the chronaxia was observed on administration of 50 mg. ephedrine (I) orally. In 4 cases the administration of I led to a 28-45% increase in chronaxia; in 3 of these the rheobase was slightly decreased. The shortening of chronaxia coincides with a certain increase of cortical excitability as evidenced by euphoria following I administration. The data indicate that the effect of I sets in 15-20 min. after its administration. The changes in chronaxia lasted 1.5-2.5 hrs. H. A. Wegner</i></p>	
<p>ASTM-SLA METALLURGICAL LITERATURE CLASSIFICATION</p>	

SANDOMIRSKIY, M. I.

BALONOV, L. A; SANDOMIRSKIY, M. I; TRAUGOTT, N. N; CHISTOVICH, A. S.

Neurophysiological study of acute infectious psychoses.

Nevropat. psikhiat., Moskva 19 no.4:65-70 July-Aug. 1950.

(CJML 20:1)

1. Of the Institute of Evolutionary Physiology and Pathology
of Higher Nervous Activity imeni Academician I. P. Pavlov
(Director -- Academician L. A. Orbeli) of the Academy of Med-
ical Sciences USSR.

SANDOMIRSKIY, M.I.

Application of chromimetry in clinical psychic disease. Zh. nevropat. psikhiat., Moskva 52 no. 6:24-30 June 1952. (CML 23:3)

1. Candidate Medical Sciences. 2. Of the Psychiatric Sector (Head -- Prof. A. S. Chistovich), Institute of Physiology imeni I. P. Pavlov (Director -- Academician K. M. Bykov), Academy of Sciences USSR.

SANDOMIRSKIY, MOISEY ISAYEVICH
SANDOMIRSKIY, Moisey Isayevich

SANDOMIRSKIY, Moisey Isayevich - Academic degree of Doctor of Medical sciences, based on his defense, 1 April 1955, in the Council of the Inst of Physiology imeni Pavlov Acad Sci USSR, of his dissertation entitled: "Narcolepsy and its pathophysiological essence in the light of the teaching of Pavlov."
For the Academic Degree of Doctor of Science

SO: Byulleten' Ministerstva Vyshego Obrazovaniya SSSR, List No. 2, 21 January 1956, Decisions of the Higher Certification Commission concerning academic degrees and titles.

SANDOMIRSKIY, M.I.

SANDOMIRSKIY, M.I.

Unconditioned and conditioned reflex changes of peripheral motor chronaxy in infectious psychoses. Zhur.nevr. i psikh. 55 no.10:759-764 '55 (MLRA 8:11)

(NERVES, PERIPHERAL, in various diseases, infect.psychoses, unconditioned & conditioned reflex changes of chronaxy)

(REFLEX, CONDITIONED, conditioned chronaximetric changes of peripheral nerves in infect. psychoses)

(PSYCHOSES, infectious, conditioned & unconditioned changes of chronaxy of peripheral motor nerves in)

SANDOMIRSKIY, M. I.

Role of subordination in the development of the psychopathological picture of psychoses. Vop.psikh. i nevr. no.1:72-78 '57 (MIRA 11:8)

1. Iz psikhiatricheskogo sektora Instituta fiziologii AN SSSR. im. I.P. Pavlova.
(PSYCHOSES)

GALKIN, Mikhail Fedorovich; SOLOMIN, Anatoliy Nikolayevich; SANDOMIRSKIY,
Mark Moiseyevich; SHAKHOV, Mikhail Alekseyevich; ZHERMUNSKAYA,
L.B., inzh., red.; FREGER, D.P., red.izd-va; BELOGUROVA, I.A.,
tekhn. red.

[Nickel-free 5KhGV steel for forging dies] Beznikelevaia stal'
5KhGV dlia shtampov pri goriachei shtampovke. Leningrad, 1961.
14 p. (Leningradskii Dom nauchno-tekhnicheskoi propagandy. Obmen
peredovym opytom. Seriya: Metallovedenie i termicheskaja ob-
rabotka, no.7) (MIRA 14:12)
(Steel alloys--Testing) (Dies (Metalworking))

ACCESSION NR: AT4016063

S/2698/63/000/000/0147/0152

AUTHOR: Gulyayev, B. B.; Stepanov, S. A.; Alekseyev, P. Ye.; Sandomirskiy, M. M.

TITLE: An investigation of the properties of high-strength cast steel with good weldability

SOURCE: Soveshchaniye po teorii liteyny*kh protsessov. 8th, 1962. Mekhanicheskiye svoystva litogo metalla (Mechanical properties of cast metal). Trudy* soveshchaniya, Moscow, Izd-vo AN SSSR, 1963, 147-152

TOPIC TAGS: welding, steel welding, high strength steel, cast steel, cast steel welding, steel, alloy steel

ABSTRACT: Engineers in various fields are making wide use of cast-welded structures, the parts of which consist of stamped details, rolled stock, and steel castings. The welding properties of cast steel, however, depend markedly on the composition. The authors therefore developed a new grade 12DKhNGDL steel which welds easily and may be used for complex castings. First of all, only 0.1-0.2% carbon was used in the steel, plus the following combined admixtures: chromium and nickel; chromium, nickel and molybdenum; or chromium, manganese and silicon, as well as vanadium and copper.

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Card

ACCESSION NR: AT4016063

From among an initial group of 35 experimental melts, the best mechanical properties were obtained with 15KhGSMF, 15KhGSNMF, 15SGNMF, 15KhN3MF, 15KhN3VF, 15Kh2NMF, 10DGN2F, 100KhNMF, 15DSGNV and 15DKhGN2MF. Further studies on their mechanical, casting and welding properties were then performed with these steels. Table 1 of the Enclosure shows the chemical composition of the five best steels with respect to crack resistance and general strength. On the basis of further tests on a commercial scale (5-ton electric arc furnace), grade 15DGN2FL steel is recommended for thin-walled castings working at normal and low temperatures, while grade 12DKhN1-MFL steel is recommended for thick-walled castings working at normal temperatures. Orig. art. has: 2 figures and 3 tables.

ASSOCIATION: None

SUBMITTED: 00

DATE ACQ: 27Dec63

ENCL: 01

SUB CODE: MM

NO REF SOV: 000

OTHER: 000

2/3

Card

ACCESSION NR: AP4040986

S/0279/64/000/003/0138/0144

AUTHORS: Zav'yalov, A. S. (Leningrad); Sandomirskiy, M. M. (Leningrad)

TITLE: The influence of rare earth elements on the composition of steel

SOURCE: AN SSSR. Izvestiya. Metallurgiya i gornoye delo, no. 3, 1964, 138-144

TOPIC TAGS: rare earth element, lanthanum, cerium, praseodymium, neodymium, iron alloy, thermal working, carbide-forming element

ABSTRACT: The authors studied the effects of the rare earth elements, (lanthanum, cerium, praseodymium and neodymium) on the phase transformation and carbide formation in alloys of iron. For this purpose, casts were made of steels with various compositions. After forging and rolling the ingots, specimens were prepared and subjected to various forms of thermal treatment. They were then treated in electrolytic solutions. Finally, the specimens were subjected to chemical and x-ray analyses. The results of the experiments showed that the rare earth elements in alloys of steel did not form carbides. On the contrary, they displaced the carbon from zones of its high concentration. Rare earth elements narrowed down the range of gamma iron. During surface saturation of the alloy by non-carbide-forming elements, carbon was removed from the surface zone to deeper zones. During saturation by carbide-forming elements, when the temperature of carbide formation was

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ACCESSION NR: AP4040986

lower than the temperature of saturation, diffusion of carbon took place from the deeper zones to the surface zone. In the case when the temperature of carbide formation was higher than the melting point, the diffusion of carbon did not occur. Orig. art. has: 7 figures and 2 tables.

ASSOCIATION: none

SUBMITTED: 17Oct63

ENCL: 00

SUB CODE: MM

NO REF SOV: 020

OTHER: 000

Card 2/2

L 45461-65 ZWP(z)/ENT(m)/ZWP(b)/T/EWA(d)/EWP(t)/EWP(w) IJP(c) MJW/JM/JQ

ACCESSION NR: AP5009267

UR/0370/65/000/001/0113/0118

24
E

AUTHOR: Zav'yalov, A. S. (Leningrad); Sandomirskiy, M.M. (Leningrad)

TITLE: Influence of rare earth metals on the sensitivity of structural steel to temper brittleness 21

SOURCE: AN SSSR. Izvestiya. Metally, no. 1, 1965, 113-118

TOPIC TAGS: structural steel, steel strength, steel plasticity, temper brittleness, rare earth element, rare earth admixture, carbide formation, brittleness threshold 07

ABSTRACT: The influence of additions of cerium (0.15, 0.30, 0.60 wt.%) lanthanum (0.15, 0.30, 0.60, 1.2 wt. %), praseodymium (0.15, 0.30, 0.60 wt.%) and neodymium (0.15, 0.30, 0.60 wt. %) to steels 35KhN3, 35KhN3MF, and 35KhG on the temper brittleness of the latter was investigated. The steel specimens were quenched in oil from 860C and tempered for 5 hrs. at 200 to 675C; cooling after tempering was in water. After tempering at 650C, part of the specimens were cooled in water, and part were furnace-cooled at 10 deg/hr. The tests were carried out at room temperature, at low temperatures (down to -196C), and

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ACCESSION NR: AP5009267

at temperatures up to +100C. Curves of the influence of the rare earths on the impact strength of the steels as a function of temperature were plotted. All the rare earths were found to lower the brittleness threshold considerably after slow cooling. In order of increasingly favorable influence on the position of the temperature threshold of brittleness on the sensitivity toward temper brittleness, the rare earths can be arranged as follows: cerium, lanthanum, neodymium, praseodymium. A carbide phase analysis of the steels, made by use of the electrolytic phase separation method, led the authors to the conclusion that the rare earths inhibit the formation and precipitation of carbides up to certain temperatures in the course of tempering, and that this accounts for the observed phenomena. Orig. art. has: 6 figures and 2 tables.

ASSOCIATION: None

SUBMITTED: 25Feb64

ENCL: 00

SUB CODE: MM

NO REF SOV: 010

OTHER: 000

Card 2/2 *mmB*

L 38976-66 EWT(m)/T/EWP(t)/ETI IJP(c) JD/JG

ACC NR: AP6013362

SOURCE CODE: UR/0370/66/000/002/0107/0109

AUTHOR: Sandomirskiy, M. M. (Leningrad); Zav'yalov, A. S. (Leningrad) 4/1
B

ORG: none

TITLE: Effect of rare earth metals on the grain size and fine structure of structural steel 1/1
b

SOURCE: AN SSSR. Izvestiya. Metally, no. 2, 1966, 107-109

TOPIC TAGS: structural steel, austenite, cerium, lanthanum, praseodymium, neodymium

ABSTRACT: The effect of cerium, lanthanum, praseodymium, and neodymium (added in amounts of 0.15, 0.30, 0.60, and 1.2%) on the grain size of 35KhN3 and 35KhN3MF 1/1
steels, on the tendency of the grain to grow during heating, and on the fine structure of the steel was studied. The grain size during heating was determined by the boundary oxidation method; the size of mosaic blocks was determined by x-ray diffraction. The rare earth elements were found to hinder appreciably the growth of austenite grains during heating and to raise markedly the temperature at which a rapid growth of grain begins. These effects increased with rising rare earth content. At moderately high temperatures (800-850°C), the rare earths are thought to decrease the degree of disorientation of austenite grains. X-ray data showed that the rare earths decrease the size of mosaic blocks somewhat following quenching, and strongly inhibit the growth of the blocks during heating of the steel. This influence of rare earths

Card 1/2

UDC: 669.14.018.29

L38976-66

ACC NR: AP6013362

is attributed to the inhibition of the process of segregation of carbon from the supersaturated α -phase. Orig. art. has: 2 figures and 1 table.

SUB CODE: 11/ SUBM DATE: 23Oct64/ ORIG REF: 007

Card 2/2/MLP

LEONOV, M.S., inzhener; SANDOMIRSKIY, S.B., inzhener.

Centralized production planning and scheduling cyclic operations in
a heavy machine-tool plant. Vest.mash.35 no.11:72-75 N '55.
(Machine-tool industry) (MLBA 9:2)